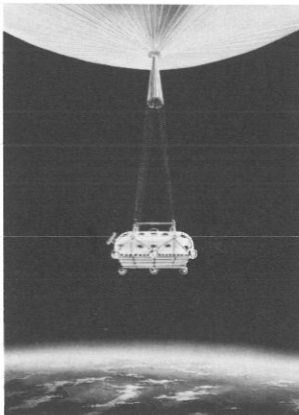




WINZEN RESEARCH INC.

MINNEAPOLIS 20, MINNESOTA

ENCLOSURE (1)



WINZEN RESEARCH INC.

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TELEPHONE TUXEDO 1-5871

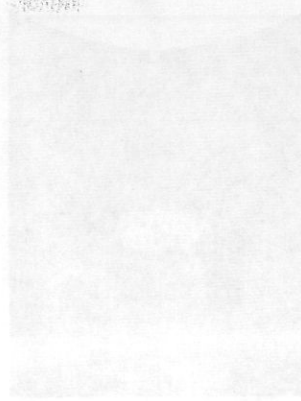
FINAL OPERATION PLAN FOR STRATO-LAB HIGH #5

Report No. 11260-R(1)

Date: 4 April 1961

WINZEN
RESEARCH INC.

1000 17th Street, N.W.
Washington, D.C. 20036
Telephone: (202) 331-1100



FINAL OPERATION PLAN
FOR STRATO-LAB HIGH 42

Report No. 11260-R(1)

Date: 4 April 1961

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ANNEX ALPHA

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ANNEX ALPHA

ANNEX BRAVO

OPERATION PLAN
FOR STRATO LAB HIGH # 5

1. Situation

During early May 1961 a high altitude manned balloon flight designated Strato-Lab High #5 will be made in the Gulf of Mexico in the Pensacola, Florida area. The flight is sponsored by the Bureau of Medicine and Surgery, the Bureau of Naval Weapons and the Office of Naval Research with technical assistance of the Naval Air Crew Equipment Laboratory, Aviation Medical Acceleration Laboratory and Project RAM of Naval Medical Research Institute. Launch will be conducted aboard the aircraft carrier USS ANTIETAM CVS-36 after which a carrier or water landing will be made.

Prior to the Strato Lab High #5 flight, it is desirable to make two test flights from the carrier for the purpose of testing gondola construction and indoctrination of flight and launch crews. The first will carry a mock-up gondola to 25,000 feet for parachute descent to test ability to withstand parachute shock and water landing shock. It will then be necessary to recover the gondola for the second flight. The second flight will be a low level manned flight for the purpose of testing drag roping over the water and explore various methods of landings.

Plans are to conduct the two test flights between 11 and 14 April; and the Strato Lab High #5 flight the first favorable date after 28 April. This operation plan will primarily pertain to the Strato Lab High #5 flight with the procedures for the test flights being contained in ANNEX ALPHA.

OPERATION PLAN

1. OBJECTIVE AND SCOPE

1.1 Introduction

The purpose of this plan is to outline the objectives, scope, and methodology of the research project. The project aims to investigate the effects of various factors on the performance of the system. The methodology involves a series of experiments and data analysis. The results will be presented in a report.

2.1 Objectives and Scope

The objectives of this study are to determine the relationship between the variables and to identify the factors that influence the system. The scope of the study is limited to the specific parameters and conditions outlined in the plan. The methodology includes a series of experiments and data analysis.

The plan is divided into two main sections: the first section describes the objectives and scope, and the second section describes the methodology. The results of the study will be presented in a report.

2. Objective

With safety of personnel paramount, STRATO-LAB HIGH #5 has the primary objective of placing two men in a near-space environment while wearing the Mercury-type Navy Mark IV full pressure suit. Under these conditions, a rigorous test and evaluation of the suit and associated protective clothing can be made.

Secondary objectives are:

2.1 Physiological Measurements

In addition to expected valuable subjective observations and comments by the flight personnel, a number of physiological data will be transmitted in flight. These data will be available to medical personnel for in flight evaluation and any indications of major personnel degradation which may be important for safety of the crew. The data transmitted will also be recorded for a post flight comprehensive analysis and evaluation of the results.

2.2 Cosmic Radiation Studies

Nuclear emulsions will be transported aloft for post flight analysis to determine the heavy particle component flux and spectrum of the cosmic radiation. Body emulsions affixed to the flight personnel will also allow post flight investigations of specific direct "hits" by heavy particles.

2.3 Photography

Photographic observations will be made for a number of purposes. These will include a record of the subjects throughout the flight, photography for meteorological purposes of the sky, a time lapse series of the balloon

for an evaluation of balloon performance, a time lapse down camera for studies in cloud physics, and a standard Navy 70 mm aircraft reconnaissance camera for determining the capability of operational equipment for very high altitude reconnaissance.

2.4 Atmospheric Physics

Special instruments will be carried aloft to provide constant measurements of the pressure, temperature, winds and water vapor in the atmosphere. Although some of the instruments to be used for these measurements are standard, a substantial portion are under development by the Navy.

2.5 Radiation Measurements

Infrared measurements will be made from horizon to horizon utilizing satellite type equipment and techniques. When coupled with camera data and atmospheric information, it should be quite valuable as a test of equipment and techniques under development for satellite measurements.

3. Flight Characteristics

Strato Lab High #5 will be conducted at 0600 CST with a planned ascent rate of 800 ft/min to the anticipated peak altitude of 120,000 feet. After a floating period of one hour at peak altitude, a descent will be initiated to descend at 400 ft/min to 35,000 feet and 600 ft/min from 35,000 to landing. The overall time aloft is expected to be between 8 and 9 hours. The method of landing will be determined after the second test flight has been completed.

for an evaluation of balloon performance, a 1000 ft. balloon will be used for the purpose of testing the balloon and a standard Navy 70 mm aircraft balloon. The balloon will be used for the purpose of testing the balloon and a standard Navy 70 mm aircraft balloon. The balloon will be used for the purpose of testing the balloon and a standard Navy 70 mm aircraft balloon.

2. Balloon Performance

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4. Meteorological Requirements

The meteorological conditions are of primary importance for the manned flight. It is desirable to have the following conditions:

- 4.1 Winds throughout flight which will cause landing within 150 miles of launch site.
- 4.2 Temperature at all altitudes greater than minus 68°C
- 4.3 Maximum wind shear not to exceed 10 knots per 1000 ft. altitude change
- 4.4 Surface visibility at launch greater than 5 miles
- 4.5 Ceiling at launch higher than 1000 ft. with little vertical extent of clouds
- 4.6 Surface winds in landing area less than 15 knots
- 4.7 Sea conditions for reasonably stable flight deck

5. Responsibilities of Representatives of Participating Organizations

5.1 Cdr. John W. Sparkman is technical director for the sponsoring organization, the Office of Naval Research, and as such is the direct representative of the Chief of Naval Research.

5.2 The operation is divided into the following phases:

	<u>Phase</u>	<u>Responsibility</u>
I.	Shipping and loading equipment aboard prior 28 April	Mr. J. R. Nelson Winzen Research Inc.
II.	From loading aboard until recovery	Commanding Officer USS Antietam (CVS-36)
III.	From recovery to packing and return shipment of all equipment	Mr. J. R. Nelson Winzen Research Inc.

5.3 Responsibilities of representative of other organizations are:

Technical Director - - - - - Cdr. J. W. Sparkman, Jr.

1. The following information is being furnished to you:

2. The information is being furnished to you for your information only.

3. The information is being furnished to you for your information only.

4. The information is being furnished to you for your information only.

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30. The information is being furnished to you for your information only.

	Office of Naval Research Field Representative Minneapolis
Pilot - - - - -	Cdr. Malcolm D. Ross Office of Naval Research
First Alternate Pilot - - - - -	Cdr. B. B. Levitt Office of Naval Research
Project Meteorologist and - - - - - Operational Assistant	Lcdr. W. S. M. Arnold Office of Naval Research
Operator of ONR Travelall - - - - - ground recovery unit	E. Sauve, AGC, Office of Naval Research, Minneapolis
Operational Assistant - - - - -	Mr. M. O. Evanick, Office of Naval Research, Minneapolis
Over-all medical aspects and - - - - first alternate flight surgeon for flight	Capt. V. G. Benson, MC, USN Aviation Medicine Acceleration Laboratory
Medical telemetry and second - - - - alternate flight surgeon for flight	Lcdr. John Gordon, MC, USN Aviation Medicine Acceleration Laboratory
Medical telemetry - - - - -	Dr. Russell Squires, Aviation Medicine Accel- eration Laboratory
Flight surgeon for flight - - - - -	Lcdr. Victor Prather, MC, USN, Naval Medical Research Institute
Project RAM Telemetry - - - - -	Lcdr. Donald Smith, Naval Medical Research Institute
Pressure suit aspects - - - - -	J. Correala, Air Crew Equipment Laboratory
BuWeps Representative - - - - -	Mr. H. Fedrizzi, Bureau of Naval Weapons
Flight altitude confirmation - - - - -	Dr. D. P. Johnson Bureau of Standards

Office of Naval Research
1015 Republic Building
Washington, D.C.

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1015 Republic Building
Washington, D.C.

Technical Information Officer - - - - - Cdr. W. D. Deibler, Office
for all phases of Strato Lab of Naval Research
High #5

6. The Commanding Officer of the USS Antietam is requested to make the following available:

- 6.1 Electronic shop space with 24 V dc and 110 V ac current available
- 6.2 Office space with typewriter
- 6.3 Flood lighting for pibals, balloon train and bubble
- 6.4 Ready room near flight deck for dressing and pre-breathing
- 6.5 One cherry-picker & driver
- 6.6 One fork lift & driver
- 6.7 One talker on hangar deck at deck edge elevator in contact with Pri-Fly or Bridge
- 6.8 One talker at launch platform on flight deck in contact with Pri-Fly or Bridge
- 6.9 MAA to control ready room
- 6.10 Meteorological support
- 6.11 LOX supply
- 6.12 24 V dc and 110 V ac available at launch platform on flight deck
- 6.13 Press Release in cooperation with ONR Technical Info Rep., Cdr. Deibler

7. The Commanding Officer USNAS Pensacola is requested to:

- 7.1 Provide tracking of the gondola by GMD
- 7.2 Provide theodolite tracking of the balloon recording elevation and azimuth angles at two minute intervals when the balloon is visible
- 7.3 Transmit upper wind information to USS ANTIETAM via _____ as follows:

a. Complete (first and second transmissions) RAOB-RAWINS of

Technical Information Officer - - - - - Col. W. D. DeBorja, Office
of Naval Research
1881 42

The Commanding Officer of the USS Albatross is requested to make the

following report:

1. The Albatross was on duty from 10:00 AM to 11:00 PM on 18 August 1942.

2. The Albatross was on duty from 10:00 AM to 11:00 PM on 18 August 1942.

3. The Albatross was on duty from 10:00 AM to 11:00 PM on 18 August 1942.

4. The Albatross was on duty from 10:00 AM to 11:00 PM on 18 August 1942.

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6. The Albatross was on duty from 10:00 AM to 11:00 PM on 18 August 1942.

7. The Albatross was on duty from 10:00 AM to 11:00 PM on 18 August 1942.

8. The Albatross was on duty from 10:00 AM to 11:00 PM on 18 August 1942.

9. The Albatross was on duty from 10:00 AM to 11:00 PM on 18 August 1942.

10. The Albatross was on duty from 10:00 AM to 11:00 PM on 18 August 1942.

11. The Albatross was on duty from 10:00 AM to 11:00 PM on 18 August 1942.

12. The Albatross was on duty from 10:00 AM to 11:00 PM on 18 August 1942.

13. The Albatross was on duty from 10:00 AM to 11:00 PM on 18 August 1942.

The Commanding Officer of the USS Albatross is requested to

provide the following information to the Commanding Officer of the

USS Albatross: The Albatross was on duty from 10:00 AM to 11:00 PM on 18 August 1942.

The Albatross was on duty from 10:00 AM to 11:00 PM on 18 August 1942.

Complete (first and second transmittals) RAOB-JAWINS of

BURRWOOD twice daily commencing first day ship is underway

- b. Second transmission only of RAWINS from BROWNWOOD, LAKE CHARLES, EGLIN, CAPE CANAVERAL, KEY WEST and YUCATAN twice daily commencing first day ship is underway.

7.4 Notify shore units as indicated in paragraph 13.1

7.5 Coordinate balloon flight with operations from Eglin AFB

8. The Chief of Naval Air Training is requested to:

8.1 Provide two helicopters for rescue and recovery (ALPHA and BRAVO)

8.2 Provide one DD for operational guard, rescue and recovery if deemed necessary after the two test flights

8.3 Arrange for theodolite tracking from Eglin AFB as in 7.2 above

9. The Commander Pacific Missile Range is requested to:

9.1 Provide one WV-2 aircraft for tracking and telemetry

9.2 Provide mobile telemetry van

10. Units Involved in Operation

10.1 USS ANTIETAM CVS-36

10.2 Balloon Gondola

10.3 WV-2 from Pacific Missile Range

10.4 Helicopter ALPHA

10.5 Helicopter BRAVO

10.6 ONR Travelall USN 93-05171

11. Schedule of Events

11.1 All equipment for the Strato Lab High #5 flight will be shipped so as to be loaded aboard prior to 29 April.

BURRWOOD twice daily commencing 1st day at 9.30 and ending 1st day at 9.30

Second 1st day only of BURRWOOD
LAKE CHARLES EOLIN CAPITAL KEY WEST
1st 1st day only of BURRWOOD

1st 1st day only of BURRWOOD

2nd 1st day only of BURRWOOD

3rd 1st day only of BURRWOOD

4th 1st day only of BURRWOOD

5th 1st day only of BURRWOOD

6th 1st day only of BURRWOOD

7th 1st day only of BURRWOOD

8th 1st day only of BURRWOOD

9th 1st day only of BURRWOOD

10th 1st day only of BURRWOOD

11th 1st day only of BURRWOOD

12th 1st day only of BURRWOOD

13th 1st day only of BURRWOOD

14th 1st day only of BURRWOOD

15th 1st day only of BURRWOOD

16th 1st day only of BURRWOOD

17th 1st day only of BURRWOOD

18th 1st day only of BURRWOOD

- 11.2 1600 CST 29 APRIL the following project personnel will be mustered in ward room by Mr. Evanick and results reported to CDR. Sparkman

ONR

Cdr. M. D. Ross
Cdr. B. B. Levitt
Cdr. W. D. Deibler
Lcdr. W. S. M. Arnold
R. F. Miles, PRCM (TAD)

PROJECT RAM

Capt. A. Rush
Lcdr. V. Prather
Lcdr. D. Smith
B. Miller, ATC
F. Barber, AT1
F. J. Braun, ATC
P. Ligocki, HM2
A. Anselm, TD2
L. Williams, HM2

WINZEN RESEARCH

Mr. O. C. Winzen
Mr. J. R. Nelson
Mr. D. L. Foster
Mr. R. M. Enderson
Mr. P. Peterson
Mr. S. Kela
Mr. S. Swenson
Mr. P. Jallen
Mr. A. Holzer
Mr. W. Murray

NATIONAL BU STDS

Dr. D. P. Johnson

N P C

C. L. Colwell, PH C
C. E. Houchin, PH1

ACEL

Mr. D. Mancinelli
Mr. J. Correala
M. Myers, HM1

AMAL

Capt. V. G. Benson
(MC)
Lcdr. J. J. Gordon
(MC)
Mr. W. Sipple
Mr. W. Hamilton

BUWEPS

Mr. H. Fedrizzi

12. Location of Personnel Prior to Launch

As of 2200 CST 29 April personnel other than those listed in 11.2 above will be located as follows and ready for launch the first favorable date:

- 12.1 WV-2 crew at Sherman Field NAS Pensacola prepared to be over ship at 0530
12.2 Crews of helicopters ALPHA & BRAVO aboard USS ANTIETAM.
12.3 Mobile van located at a location determined by Capt. Benson
12.4 ONR Travelall USN 93-05171 at Naval Weather Service Office Sherman Field

13. Description of Duties of Each Unit

- 13.1 Based upon a study of the existing and forecast situation, the decision of whether or not to launch will be made by personnel

aboard ship at 2330 CST each day preceding launch of Strato Lab High #5. When the decision is made to launch, the NOTAM concerning launch will be passed to NAS Pensacola for relay to FAA. Information concerning launch will be passed to the crews of the WV-2, ONR Travelall, mobile van, and Eglin operations by Sherman Field when NOTAM is received.

- 13.2 Helicopters ALPHA and BRAVO aboard the USS ANTIETAM will be available throughout the balloon flight with; the capability of immediately transporting 3 medical and rescue personnel with 80 pounds of equipment to an emergency or normal landing a maximum of 65 miles from the ship.
- 13.3 The WV-2 aircraft will track balloon throughout flight (8.5 hours. Coordinate efforts of rescue units in case of emergency descent if ship is not near landing and act as back-up telemetry station for the shipboard telemetry units.
- 13.4 The mobile telemetry van will telemeter as capable from the estimated best position.
- 13.5 The ONR Travelall with Chief Sauve as operator will be available in case of a landing ashore. Chief Sauve will also assist the meteorological unit at Sherman Field in relaying the necessary meteorological data.

It is not possible to find a single word in the Bible which is not found in the Greek text.

The Greek text is the only one which is not found in the Bible.

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14. Sequence of Events After Decision to Launch

- 14.1 Launch date may be any date after 29 April. When launch date has been determined, information to this effect will originate with the CO USS Antietam and will be passed to NAS Pensacola for relay to units concerned in accordance with paragraph 13.1. The time schedule noted in 14.3 below is in Central Standard Time; and will be the order of events on launch day.
- 14.2 During preparations and launch, Cdr. Sparkman will be available on the bridge; and in launch platform area. LCDR. Arnold will be located at Primary Fly. Mr. Evanick and Chief Miles will be assisting launch crew on hanger deck and flight deck.

13. Sequence of Events After Decision to Launch

13.1 Launch date may be any date after 22 April. When launch date has

been determined, information to this effect will be relayed with

the CO list and plans and will be passed in this format to

the appropriate command. A schedule will be prepared by 1. The

time schedule listed in 13.2 below is in Central Standard Time

and will be the order of events on launch day.

13.2 During preparation and launch, the following personnel will be available

on the ship and a launch platform will be used. The launch will

be launched at 1000 hours. The launch will be launched at 1000 hours

and the launch crew on launch deck and flight deck

14.3 Schedule of Events

<u>Sched. Time</u>	<u>Phase of Operation and Cognizant Person(s)</u>																								
2330	Decision is made to launch.																								
2335	USS Antietam pass NOTAM to NAS Pensacola concerning intended launch and landing position. <u>LCDR. ARNOLD</u>																								
2340	NAS Pensacola pass NOTAM in accordance with Para. 13.1.																								
2340	Muster launch crew at #2 elevator on hanger deck. <u>J. R. NELSON</u>																								
	<table border="0"> <tr> <td>D. Foster</td> <td>CVA-36 Cherry picker Driver</td> <td>_____</td> </tr> <tr> <td>W. Murray</td> <td>CVA-36 Fork Lift Driver</td> <td>_____</td> </tr> <tr> <td>R. Enderson</td> <td>CVA-36 Elevator Operator</td> <td>_____</td> </tr> <tr> <td>S. Kela</td> <td>CVA-36 Elevator Operator</td> <td>_____</td> </tr> <tr> <td>P. Peterson</td> <td>CVA-36 Talker</td> <td>_____</td> </tr> <tr> <td>S. Swenson</td> <td>CVA-36 Talker</td> <td>_____</td> </tr> <tr> <td>P. Jallen</td> <td></td> <td></td> </tr> <tr> <td>A. Holzer</td> <td></td> <td></td> </tr> </table>	D. Foster	CVA-36 Cherry picker Driver	_____	W. Murray	CVA-36 Fork Lift Driver	_____	R. Enderson	CVA-36 Elevator Operator	_____	S. Kela	CVA-36 Elevator Operator	_____	P. Peterson	CVA-36 Talker	_____	S. Swenson	CVA-36 Talker	_____	P. Jallen			A. Holzer		
D. Foster	CVA-36 Cherry picker Driver	_____																							
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R. Enderson	CVA-36 Elevator Operator	_____																							
S. Kela	CVA-36 Elevator Operator	_____																							
P. Peterson	CVA-36 Talker	_____																							
S. Swenson	CVA-36 Talker	_____																							
P. Jallen																									
A. Holzer																									
2345- 0030	1. Physical examination of crew. <u>CAPT. BENSON + LCDR. GORDON</u> 2. Blood sample and urine specimen. <u>W. HAMILTON + P. LIGOCKI</u> 3. Additional examinations as directed by <u>CAPT. BENSON.</u>																								
0000	1. Talkers man phones at #2 elevator on hanger deck and at platform site. Elevator crew man stations. <u>MR. EVANICK</u> 2. LOX converter on flight deck at gondola. <u>MANCINNELI + MEYERS</u> 3. Two A-13-A2 masks to ready room. <u>HAMILTON</u>																								
0000	MAA from ship assume watch outside ready room. _____																								
0000- 0030	1. Set up flood lighting. <u>CHIEF MILES</u> 2. Pressure suit check in ready room. <u>MANCINELLI + MEYERS</u> 3. Move launch gear except gondola onto #2 elevator and report by talker to Pri-Fly or bridge when ready to come to flight deck. (Check list). <u>J. R. NELSON</u>																								



<u>Sched. Time</u>	<u>Phase of Operation and Cognizant Person(s)</u>
0015	1. Pre-breathing O ₂ supply to ready room. <u>MANCINELLI + MEYERS</u> 2. Power supply and equipment for ready room telemetry. <u>SIPPLE + BRAUN + WILLIAMS</u> 3. Two blankets to gondola for pre-launch comfort of flight crew. <u>LIGOCKI</u>
0030- 0100	Instrumentation of flight crew for medical monitoring pre-launch, flight and post flight. To include nuclear emulsions as indicated. <u>CAPT. BENSON</u> <u>COMMANDER ROSS</u> <u>LCDR. PRATHER</u> LCDR. GORDON LCDR. SMITH (BRAUN, ATC) W. HAMILTON, HM1 L. WILLIAMS, HM2 W. SIPPLE P. LIGOCKI, HM1
0035	1. Two walk-around oxygen bottles to ready room. <u>MANCINELLI + MEYERS</u> 2. Bring elevator topside with gear (except gondola) and launch personnel when clearance received from bridge or Pri-Fly. <u>LCDR. ARNOLD</u>
0045- 0140	Prepare all equipment for launch which does not require zero wind conditions (Check List) <u>J. R. NELSON</u>
0100	Flight crew don pressure suits.
0115	Inform Capt. Benson when pressure suit check complete. <u>MANCINELLI</u> J. COREALLA M. MEYERS W. HAMILTON A. O. ANSELM
0115- 0200	Telemetry check for integrity of system in ready room and report results to Capt. Benson. <u>COMMANDER ROSS</u> <u>LCDR. PRATHER</u> LCDR. GORDON LCDR. D. SMITH W. SIPPLE L. WILLIAMS, HM2 W. HAMILTON, HM1 F. J. BRAUN, ATC

Sched. Time	Phase of Operation and Cognizant Person(s)
0130	Prepare, clear and send necessary NOTAMS. <u>LCDR. ARNOLD</u>
0130	Notify Pri-Fly or bridge when ready for zero wind. <u>J. NELSON</u>
0140- 0150	1. Set zero wind conditions and erect guide pibals. <u>CDR. SPARKMAN</u> 2. Bring gondola topside and secure to flight deck. <u>M. EVANICK</u>
0150- 0330	Layout balloon and prepare for inflation. <u>J. NELSON</u>
0200- 0215	Move flight crew to gondola and make necessary connections. <u>CAPT. BENSON</u>
0300	Check LOX converters in gondola. Top off if necessary. <u>MANCINELLI</u>
0300- 0345	Flight crew to ready room. <u>MANCINELLI + MEYERS + (PR OF SHIP)</u>
0330	CAPT. BENSON reports crew ready to CDR. SPARKMAN.
0330- 0530	Inflate balloon after approval from bridge or Pri-Fly and CDR. SPARKMAN. <u>J. R. NELSON</u>
0345	Transfer O ₂ source from gondola LOX to gondola standby LOX, or walk-around bottles as desired.
	Check crew for comfort - temperature and humidity. <u>CAPT. BENSON + MANCINELLI</u>
0345- 0400	Flight crew return to gondola and make necessary connections. Check suit pressurization on gondola LOX supply. <u>MANCINELLI + MEYERS + PR of SHIP</u>
0350- 0535	CAPT. BENSON check flight crew comfort at times listed below: 0350 0400 0430 0455 0515 0535
0400	Crew begin pre-breathing. _____
0515- 0550	Let balloon up. <u>J. R. NELSON</u> CDR. SPARKMAN relays information on fore and aft position of balloon through talker at launch platform. ("Balloon tending forward" or "Balloon tending aft").

<u>Sched. Time</u>	<u>Phase of Operation and Cognizant Person(s)</u>
0545	Make valve check.
0545	Transfer gondola LOX supply and final pressure suit check. <u>MANCINELLI + MEYERS</u>
	Telemetry transmitters on broadcast permanently and communications on gondola power. <u>SIPPLE + BRAUN</u>
0550	Helicopter ALPHA with Dr. J. Gordon ready for turn up to cover emergency situation. <u>LCDR. ARNOLD</u>
0550- 0558	Continual visual and auditory monitoring of flight crew. <u>CAPTAIN BENSON + LCDR. GORDON + MANCINELLI</u>
0550	Fork lift driver ready to remove launch platform.
0555	Obtain permission to launch from bridge. <u>CDR. SPARKMAN</u>
0558	All personnel except launch crew to be aft of forward end of island: PRI-FLY PASS WORD.
0600	Launch upon approval of CDR. SPARKMAN. <u>J. R. NELSON</u>

15. Procedures After Launch

- 15.1 Immediately after launch the balloon can be expected to travel easterly approximately 60 miles during the first 1.5 hours, after which it can be expected to move slowly in a westerly direction as it ascends to ceiling. Due to this type ascent it is anticipated that after 1.5 hours of ascent the balloon will be at its greatest horizontal distance from the ship and in its most undesirable position for an emergency descent. In order that this horizontal distance be made a minimum it will be necessary for the ship to proceed immediately after launch to the predicted location of the balloon 1.5 hours after launch. After wind information has been obtained from the ascent the optimum position of the ship for covering both an emergency descent and normal descent can be better determined.
- 15.2 Communications between gondola, ship, WV-2 and helicopters will be on UHF 272.4 primary, 384.4 secondary and 243.0 guard. To facilitate tracking the balloon will continuously transmit altitude on 1710 Kc and in case of emergency the crew will have the capability of keying this frequency CW. Every half hour on the hour and half hour the gondola will transmit (UHF) pertinent information concerning flight conditions. The USS Antietam, the WV-2 and all other capable units should copy these transmissions on Chart No. 1 Situation Reports. (See last page).
- 15.3 During the ascent portion of the flight, it is imperative that the gondola crew know as soon as possible when ascent ceases. With

the blinds on the gondola in a closed position, indications of balloon failure may first be received through altitude telemetry. For this reason, W. Murray will monitor the ascent aboard the USS ANTLETAM from launch and "Indication no ascent" will be passed immediately to the gondola should the occasion arise.

- 15.4 During the flight it will be necessary for medical personnel aboard the USS Antietam and the WV-2 to discuss telemetered physiological data. These transmissions will be made on the UHF secondary frequency 384.4 mc.
- 15.5 For the purpose of communications between units during this operations, the following calls will be used:

<u>UNIT</u>	<u>CALL SIGN</u>
U.S.S. Antietam	NAN CHARLIE ABLE 30
Helicopter (ALPHA)	NAN CHARLIE ABLE 31
Helicopter (BRAVO)	NAN CHARLIE ABLE 32
PMR WV Aircraft	NAN CHARLIE ABLE 33
Mobile Telemetering Van	NAN CHARLIE ABLE 34
ONR Travelall	NAN CHARLIE ABLE 35
Strato-Lab High V	NAN CHARLIE ABLE 38

- 15.6 The two portions of the flight most likely to require an emergency descent are on ascent between 40,000 and 50,000 and upon reaching 118,000 feet. In case of an emergency descent all units should make every effort to render assistance at landing. In order that medical and rescue personnel will be at an emergency landing, helicopters

Alpha and Bravo should be available for an immediate take off throughout the balloon flight.

- 15.7 Procedures for normal landing and recovery will be determined after completion of the test flights.

Alpha and Bravo should be available for an immediate take off

throughout the latter night

15.7 Procedure for normal landing and recovery will be determined

after completion of the test flight

ANNEX ALPHA

TEST FLIGHTS

1. It is anticipated that two days will be required for the test flights necessary for the launch of the Strato Lab High #5 flight. An attempt will be made to complete these tests between 11 and 14 April. If not completed during this period, they will be again planned for early May. Each of these flights may be conducted with the ship leaving port in the morning and returning the same day. The first of these flights will test the ability of the gondola to withstand the parachute opening shock and the water landing shock plus serve as an indoctrination for all concerned with launch and recovery. This flight will be conducted using a mock up gondola and a 2 million ft³ balloon rather than a 10 million ft³ as on the Strato Lab High #5 flight. The method of launch will be the same as the Strato Lab High #5 flight. After launch the balloon will ascend to 25,000 feet where the load will be released on the parachute. An attempt will be made to observe the chute opening from the ship and the water landing from both the ship and a helicopter.

The second day of test flights will be low level manned flights to indoctrinate flight crew in drag-roping over water and examine the various possibilities of landing. On this flight a 45 foot balloon will be used and will carry the mock up gondola modified with releasable ballast aboard. This flight will carry sufficient ballast for numerous passes and wave-offs. From information obtained on this flight the type of landing for Strato Lab High #5 will be determined.

2. For the purpose of making the test flights the following personnel will

ANNEX ALPHA

LETTERING

1. The following is a list of the lettering found on the aircraft.

2. The aircraft is marked with the following lettering:

3. The aircraft is marked with the following lettering:

4. The aircraft is marked with the following lettering:

5. The aircraft is marked with the following lettering:

6. The aircraft is marked with the following lettering:

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16. The aircraft is marked with the following lettering:

17. The aircraft is marked with the following lettering:

18. The aircraft is marked with the following lettering:

19. The aircraft is marked with the following lettering:

20. The aircraft is marked with the following lettering:

21. The aircraft is marked with the following lettering:

be aboard the USS Antietam:

ONR

Cdr. J. W. Sparkman
Cdr. M. D. Ross
Cdr. B. B. Levitt
Cdr. W. D. Diebler
Lcdr. W. S. M. Arnold
R. F. Miles, PRCM (TAD)
E. E. Sauve, AGC
Mr. M. O. Evanick

ACEL

Mr. D. Mancinelli

AMAL

Capt. V. G. Benson

WINZEN RESEARCH

Mr. O. C. Winzen
Mr. J. R. Nelson
Mr. D. L. Foster
Mr. R. M. Enderson
Mr. P. Peterson
Mr. S. Kela
Mr. S. Swenson
Mr. P. Jallen
Mr. A. Holzer
Mr. W. Murray

BUWEPS

Mr. H. Fedrizzi

3. For recovery and transporting observing personnel to the landing of the first test flight it will be necessary to have a helicopter capable of carrying 3 personnel to a point 40 miles maximum, remain there 30 minutes, and return to the ship. Rescue and recovery on the second test flight will require a helicopter to deliver 3 medical and rescue personnel to the final landing (max 30 miles), remain there 30 minutes and return them and gondola crew (2) to the ship.

4. All personnel and equipment are to be loaded aboard and ready to depart Pensacola prior to 2400 10 April. On the first favorable date after 10 April the ship will depart for the launch site and preparations will begin immediately for launch of first test flight. It is expected that this launch can be made within 60 miles of shore. The following will be the sequence of events on launch date:

Sched Time
0800

Phase of Operation and Cognizant Person(s)

1. USS Antietam pass NOTAM to NAS Pensacola concerning intended launch and landing position. LCDR. ARNOLD
2. NAS Pensacola pass NOTAM to FAA.
3. Ship gets underway.

THE UNIVERSITY OF CHICAGO

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CHICAGO, ILLINOIS
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ALBERT EINSTEIN

ALBERT EINSTEIN

1962

ALBERT EINSTEIN

ALBERT EINSTEIN

ALBERT EINSTEIN

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ALBERT EINSTEIN

<u>Sched Time</u>	<u>Phase of Operation and Cognizant Person(s)</u>																								
0800	4. Muster launch crew at #2 elevator on hanger deck. <u>J. R. NELSON</u>																								
	<table border="0"> <tr> <td>D. Foster</td> <td>CVA-36 Cherry picker Driver</td> <td>_____</td> </tr> <tr> <td>W. Murray</td> <td>CVA-36 Fork Lift Driver</td> <td>_____</td> </tr> <tr> <td>R. Enderson</td> <td>CVA-36 Elevator Operator</td> <td>_____</td> </tr> <tr> <td>S. Kela</td> <td>CVA-36 Elevator Operator</td> <td>_____</td> </tr> <tr> <td>P. Peterson</td> <td>CVA-36 Talker</td> <td>_____</td> </tr> <tr> <td>S. Swenson</td> <td>CVA-36 Talker</td> <td>_____</td> </tr> <tr> <td>P. Jallen</td> <td></td> <td></td> </tr> <tr> <td>A. Holzer</td> <td></td> <td></td> </tr> </table>	D. Foster	CVA-36 Cherry picker Driver	_____	W. Murray	CVA-36 Fork Lift Driver	_____	R. Enderson	CVA-36 Elevator Operator	_____	S. Kela	CVA-36 Elevator Operator	_____	P. Peterson	CVA-36 Talker	_____	S. Swenson	CVA-36 Talker	_____	P. Jallen			A. Holzer		
D. Foster	CVA-36 Cherry picker Driver	_____																							
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P. Peterson	CVA-36 Talker	_____																							
S. Swenson	CVA-36 Talker	_____																							
P. Jallen																									
A. Holzer																									
0805	Talkers man phones at #2 elevator on hanger deck and at platform site. Elevator crew man stations. <u>MR. EVANICK</u>																								
0805-0830	Move launch gear except gondola onto #2 elevator and report by talker to Pri-Fly or bridge when ready to come to flight deck. (Check list). <u>J. R. NELSON</u>																								
0830-0930	Prepare all equipment for launch which does not require zero wind conditions (Check List).																								
1000-1015	1. Set zero wind conditions and erect guide pibals. <u>CDR. SPARKMAN</u> 2. Bring gondola topside and secure to flight deck. <u>M. EVANICK</u>																								
1015-1145	Layout balloon and prepare for inflation. <u>J. NELSON</u>																								
1145-1345	Inflate balloon after approval from bridge or Pri-Fly and Cdr. Sparkman. <u>J. R. NELSON</u>																								
1400-1435	Let balloon up. <u>J. R. NELSON</u> CDR. SPARKMAN relays information on fore and aft position of balloon through talker at launch platform. (Balloon tending forward" or "Balloon tending aft")																								
1435	Fork lift driver ready to remove launch platform.																								
1440	Obtain permission to launch from bridge. <u>CDR. SPARKMAN</u>																								
1443	All personnel except launch crew to be aft of forward end of island: PRI-FLY PASS WORD.																								
1445	Launch upon approval of CDR. SPARKMAN. <u>J. R. NELSON</u>																								

ANNEX BRAVO

MEDICAL

Capt. V. G. Benson (MC) USN AMAL has been designated the medical officer with prime responsibility of flight safety and the medical aspects of recovery. In addition he is responsible for pre-flight, flight and post flight medical evaluation of the flight crew. Lcdr. J. J. Gordon has been designated as his alternate and will assume all of Capt. Benson's responsibilities should the occasion arise.

All medical monitors and medical personnel are responsible to Capt. Benson. His decisions will be based on the opinions of all medical officers concerned, but in all events this decision will be final. Capt. Benson has direct and constant liaison and communication with the Technical Director, Cdr. Sparkman. Capt. Benson will keep Cdr. Sparkman advised of the flight crew's medical profile. Cdr. Sparkman is obligated to recommend flight termination at any phase when this recommendation is made by the prime medical monitor. The situation requiring this action will be discussed by Capt. Benson, Cdr. Sparkman, and----if time permits----with the flight crew so that the type of termination required (immediate by parachute or remaining with the balloon) will be clearly understood in context with the emergency condition.

The medical monitors and other medical personnel taking part in Strato-Lab 5 will be briefed aboard the USS Antietam 29 April. At this time medical monitoring policies, recovery procedures, and medical evaluation studies of the flight crew

will be reviewed. Limits of physiological variations will be outlined by Capt. Benson. Any variations in the telemetered physiological parameters noted by any of the medical monitors will immediately be relayed to Capt. Benson. All final interpretations of data and all communications with the gondola will be made by Capt. Benson, or his designated representative.

Medical monitoring telemetering frequencies are as follows:

Subject ALPHA

Cdr. M. D. Ross 225.7 MC

Subject BRAVO

Lcdr. V. Prather 231.4 MC

SITUATION REPORTS

TIME	ALTITUDE	OXYGEN REMAINING	BLIND POSITION	TEMPERATURE	REMARKS

CHART 1
POSITION REPORTS

DATE	TIME	POSITION	TEMPERATURE	WIND
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 CINCANTFLT (2)
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